

THE
INRICHMENT
Of the Weald of
KENT.

OR,

A Direction to the Husband-man, for the
true Ordering, Manuring, and Inriching of all the
Grounds within the Wealds of *Kent*, and *Sussex*;
and may generally serve for all the Grounds in
England of that nature: As,

1. *Shewing the nature of Wealdish Grounds, comparing it with the
soyl of the Shires at large.*
2. *Declaring what the Marl is, and the severall sorts thereof, and
where it is usually found.*
3. *The profitable use of Marl, and other rich manuring, as well in each
sort of Arable Land, as also for the increase of Corn and Pasture through
the Kingdome.*

Painefully gathered for the good of this Iland, by a man of
great Eminence and Worth, but revised, enlarged, and cor-
rected with the consent, and by conference with
the first Author.

By G. M.

Genesee Markham

LONDON,

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INDIAN TERRITORY J. H. M. M.

A. D. 1890
The following is a list of the names of the
persons who have been appointed to the
positions of the various offices of the
Territory of the Indian Territory.

For the office of the
Commissioner of the
General Land Office,
the following persons have been appointed:
For the office of the
Surveyor General,
the following persons have been appointed:
For the office of the
Recorder of Deeds,
the following persons have been appointed:
For the office of the
Clerk of the Court,
the following persons have been appointed:

J. H. M. M.

For the office of the
Attorney General,
the following persons have been appointed:
For the office of the
Judge of the Court,
the following persons have been appointed:
For the office of the
Clerk of the Court,
the following persons have been appointed:



TO THE
HONOURABLE
 Knight, Sir **GEORGE RIVERS**
 of Chafford, in the Countie of
KENT.

SIR,



*Ad I no scale (more than this bare
 and plain moulded Epistle,) by which
 to come to your worthy eares, yet in
 respect of the honest livery which it
 carries, (being necessary and husbandly
 Collections, especially gathered for the
 Country and Soyl wherein you live) I
 know it cannot chuse but find both fa-
 vour & mercy in your acceptation; but
 when I call into my consideration the
 great worthines of your experience in this and all other the like
 affairs which tend to the generall benefit of the Common-wealth,
 and weigh the Excellency of your Wisedome, Judgement, Bounty,
 and Affection unto Hospitality (which give both strength and ad-
 vancement to projects of this nature) I could not but take unto
 myself a double encouragement, and boldly say unto this Work
 which I offer unto your goodnes, Goe and approach with all thy
 sweetness before him, he that so perfectly knowes all which thou
 canst or wouldest discover; he that is able both to correct and a-*

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Gen. Res. 116. 93. Prompter

The Epistle Dedicatory.

commend any thing that is imperfect in thee, he, for vertues sake, will never forsake thee. Beleeve me (worthy Sir) should this Subject wish it self a Patron, I doe not think it could wish beyond you; for you are a volume full of all that of which it intreateth: witness your yeares, your supportation of the poor, and your continuall employments; with any of which there is not (of your rank) a second living in your Country, to walk hand on hand with you. Being then (dear Sir) the oldest and best friend to your Countrey, forsake neither, nor this which comes to serve it; and though in this Glass some lineaments may appear imperfect, yet by the help of your favour (though little be exact, or most excellent) nothing shall be gross or unworthie the survey of your worthier patience. And so I rest,

Yours to be commanded.

Gervase Markham.



A Discourse of the Weald of Kent; and a comparison of Arable Lands therein, with the other parts of the Shires. Together with some necessary counsels for the ordering and imriching of the marleable Lands in the Weald, as generally in any part of this Kingdome.



He Weald of Kent is the lower part of that Shire, Further Ad-
lying on the South side thereof, and adjoyneth to the Weald of *Sussex*, to the West.

This Weald, both in Kent and *Sussex*, was sometimes all (or the most part) woody, Wild, and (in the first times) uninhabited; and from thence took the name of Weald from the Saxon word, *Weale*, or *Teale*, or *Weald*, which signifieth a Woody Countrey, or Forrest-like ground. The Britons called it *Andred*, which signifieth Greatness or Wonderfull; and in Latine it was called *Salus Andred*, (that is to say) the Chase or Forrest of *Andred*, by reason of the great circuit, or large bounds thereof.

Touching the true boundary or limits of this Weald, there have been diverse opinions, and most of them various, and much differing both in place & quantity, but that which is the neerest & best allied unto truth, both according to the opinions of *Affertus Menevensis*, Henry of Huntingdon, & others of most credible report, is that extendeth from the city of *Winchelsey* in *Sussex* an hundred and twenty miles in length towards the West; and thirty miles in breadth towards the North. Now although this report be most agreeing unto veritie, yet who knows not that curiosity may raise up many objections to withstand it; and therefore M. *Lambert* in his *Perambulation of Kent*, hath prescribed the best and most infallible way to find out the true and

certain bounds of this Weald, to be only by Jewry, or the Verdict of twelve men impannelled for that purpose, either in case of controversie, or other particular search; and this hath been in these latter times brought forth most plentifully: for it hath been found by divers late Verdicts, upon speciall and most necessary occasions, that the Weald of Kent is truly M. Lamberts second step in his Perambulation of Kent; reaching from *Winchelsey* in *Suff*, and that hill there, unto the top of *Rivers* hill in Kent; and neither farther towards *London*, nor shorter towards *Tunbridge*; which agreeth so perfectly with the former limitations, that both may be received as most true and sufficient.

This Weald was for many yeares held to be a wild Desert, or most unfruitfull Wildernesse (as write the authors before mentioned) and indeed such is the nature and disposition of the soyl thereof to this very day: for it will grow to *frith* or wood, if it be not continually manured and laboured with the plough and kept under by tillage; so as it may truly be said of it, *Incolta parantur vomere Sylva*. It is throughout (except in very few places adjoyning to brooks or rivers) of a very barren nature, and unapt either for pasturage or tillage, untill that it be holpen by some manner of comfort, as dung, marl, fresh earth, fodder, ashes, or such other refreshings; and that seemeth to have been the cause for which in old time it was used as a wildernesse, and kept for the most part with herds of Deer, and droves of Hogs, as is specified in divers historicall relations.

And as there be yet remaining in *Sussex* divers great forrests and sundry commons or wasts, having five or six miles in length, which for the most part are not fit to be manured for corn, and yeeld but little profit in pasture; so have there been also in *Kent* (within our memory) a great number of woody and over-grown grounds, converted of late, even after such a manner as in the said Perambulation is testified: where it is said; That although the Weald of *Kent* belonged to sundry known owners long since, yet was it not then allotted into particular Tenancies, as the other parts of the shire were, but it was, in proesse of time, by little and little gained, as men were contented to inhabit there, and to rid it of the wood. And hereof it is also, that besides sundry whole parishes which

be named dens, or low places, as *Tenderden*, *Marden*, *Beneden*, and sundry others, there be moreover many smaller portions almost in every part of the Weald of *Kent*, which he likewise called dens; as the den of *Cranebrook* in *Cranebrook*, the den of *Hawkhurst* in *Hawkhurst*, and such others; the which (as it seemeth) were at the first undertaken to be manured by sundry particular persons, whose names were then taken for those very dens, and continued many yeares together, as by antient evidences it doth yet appear, howsoever the age of long time hath now almost worn & consumed them all out of knowledge. Neither doth the Weald of *Kent* contain so many great manors or courts (for the proportion of the largeness) as the rest of the Shire doth, but was appertaining, for a great part thereof, to sundry of those manors which doe lyat large dispersed thorow the Shire, whereof each one had a great portion in the Weald, which both in the book of *Dooms-day*, and in sundry the court Rolls, and Rentals, passeth by the name of Weald, and *Sylva Porcorum*, or swine gats, which were granted to divers of the farmers and owners of sundry tenancies which did belong unto those dens and other lands within the Weald.

And albeit these dens be for the most part good large portions of lands, that be now broken into many severall possessions, so as the same one Den sufficeth twenty householders at this day, yet it is very likely that each man at the first had his severall den wholly and unbroken, whereof he and his posterity beareth name, untill that the same was by the custome of *Gavelkind*, by sale or by exchange divided and distributed amongst others into parts, as we do now see them. But howsoever this Weald be of it self unfruitfull (as I said) and of a barren nature, yet so it hath pleased the providence of the Almighty to temper the same, that by the benefit of Margle or Marle (as it is commonly called) it may be made not only equall in fertility with the other grounds of the shire, as well for Corn as Grass, but also superiour to the more and greater part of the same. The which manner of bettering the ground is not now newly discovered, but was the antient practice of our forefathers many years agoe, as by the innumerable Marle-pits digged and spent so many years past, that trees of 200, or 300 yeares

The use of
Marle is an-
cient.

Marling was
discontinued
and is now re-
vived.

years old, doe now grow upon them, it may most evidently appear, besides the which we have mention of Marle in books of gainage or husbandry, that were writtten in the daies of K. Edward the 2. or before, howbeit the same manner of tillage, by meanes of the civill warrs, maintained many yeares as well in the time of the Barons warrs, as of the warrs between the house of York, and the family of Lancaster, was so given over, and gone out of use, untill these thirty or forty years, that it may be said to have been then newly born and revived, rather than restored, because the very true art of inriching the ground by Marle, seemeth to lye hidden in part, as yet not to be discovered to the full: for in this short time we have seen many arable grounds, which for sundry yeares after the marling of them, have plentifully borne Wheat and other grain, to be now become unfruitfull, and so will they continue, albeit they should be now marled again. And this commeth to pass by the ignorance of the right manner of ordering the Marle, which is as strong and cheerfull as ever it was before, howsoever it worketh not his naturall effect, through the unskillfulness of the Husbandman, that both wasteth the Marle, and loseth with all his time, his labour, his cost, and the profit of his ground. I cannot deny but a man shall see some grounds of nature fit to take Marle, and of situation so neer to Marle-pits long time opened, that they might be marled plentifully with little charge; and have been heretofore marled indeed, and yet the same to lye now unplowed, and not only barren of themselves, but also unapt for marle, and incapable of amendment by Tillage: but I must say withall, that albeit the men in those former ages had the right ordering of marle, yet were they not all good Husbandmen alike, neither doth the Field joy alike under the Farmer, and under the very owner of the same, the one seeking the very uttermost gain that may be made during his short interest, and the other endeavouring to perpetuate his commodity, even to the end of his estate, which hath no end at all: so that through unskillfulness of the one, and greediness in others, the ground may sooner be crumbled to death with Marle, then it shall be made the better or fitter by it. The reason whereof I will reserve, untill that I have cause to teach in particular after what man-
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ner and measure the ground is to be marled. In the mean while I will open the nature and conditions of this Wealdish ground, comparing it with the Soyl of the shire at large, and afterward declare unto you what the Marl is, and what sorts thereof there be usually found in the Weald of Kent, and lastly enter into the true and profitable use thereof, as well in each sort of arable Land, as also for the increase of Corn and Pasture through the Kingdome.

The arable ground of this Weald hath commonly a fleet and shallow mould to be turned up by the plough, so as in many places the dead earth or mould is within three inches of the face of the ground, and in the best places, the good Mould exceedeth not six inches in depth at the most; and therefore it wanteth convenient substance to nourish Corn any long time, but will faint and give over after a crop or two; for the which reason also, it cannot yeeld any sweet or deep grass. Besides this, the Weald hath many copped or hillish grounds, out of which there do many Quits or Springs of water issue, that make it cold and barren; and from these hillocks, the best part of the good Mould is washed down into the Water-courses and Dikes that be made to divide and drain the Land. Furthermore the Weald is divided into many small inclosures, the biggest sort (for the most part) of which, are between sixteen Acres and twelve in quantity, and thereby hath it many Hedges and Trees, which in unseasonable weather doe keep both the Sun and wind from the Corn, so as for want of that succour and comfort, it groweth, and many times rotteth in the earth, so that it earneth not, nor eareth, nor prospereth not kindly many times. And these small Closes are caused by this, that men are not able to Marl any great part or quantity of ground at once; and having marled a little, they are desirous to sow it with corn: for the preservation whereof, as also for draining it, they are enforced to make so many and small severalls: for all which reasons it is plain, that there is little good arable Land there, and rarely any good Pasture, those onely places excepted, which are amended by Irrigations of floods, which there is called flowing and overflowing. Contrarywise, the arable land of the Shire at large hath a deep and fat Mould of good earth, that is

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able to bear five or six good Crops together without intermission; and after 3. or 4. years rest, will do the like again, and may so interchangeably keep that course for ever: yea, there be many grounds that are sowed without ceasing, because the Mould is so deep, that when the upper part thereof beginneth to faint and be weary, men can add some strength of Cattell, and with the Plough go deeper, and fetch up a fresh Mould that will continue for a long season. Furthermore this arable ground is a hollow dry ground, for the most part, on a deed Clay, that by tillage, and the weather, will become dry and spongy, so at the Rain there washeth in the fat of the earth, the rather because it is not so hillish and sliding as the Weald, but more leuell, even, and champion also, by which the Sunne and Wind do dry the corn, and doe make it carn or care well, and yeld a purer flower then that which is sobbed in wet, and hath long timelyen before it be dried again. But for as much as the great odds between these two sorts of grounds, may be made even by the help of *Marl*, if it be rightly ordered, as I said, I will now shew you what it is, and how many sorts thereof be found in this Weald of our Country. *Marl* is indeed, as it is in name, the fat or (marrow) of the earth: for so did the *German*, and so did our elders the *Saxons* terme it, of the word *Marise*, which we sound *Marrow*, and thereof we call it *marling*, when we besow that fat earth upon our lean ground. *Pliny* saith, that the *Brittains* (meaning us) did use to amend their Land with a certain invention which they called *marga*, that is, the fat of the earth, and it is to be seen in *Conradus Heresbach*, that the *German*s doe use it to the same end, and doe call it by the same name till this very day: it is therefore a fat, oily and unctious ground, lying in the belly of the earth, which is of a warm and moist temperature, and so most fertill, seeing that heat and moisture be the father and mother of generation and growth; howbeit this is not a pure and simple marrow (as that is which lieth in our bones) but a iuyce, or fat liquor mingled with the earth, as is the fat which lyeth mixed, and dispersed in our flesh, so as the one may be drawn away, and the other remain, as it shall anon appear unto you.

Four sorts of
Marle.

Four sorts of *Marle* be found in this Weald, known asun-

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der by the difference of colours, and thereby also differing in degrees of goodnesse one from the other: for there is a gray, a blew, a yellow, and red Marle, all which be profitable, if they be earthy and fat, or slippery as soape: and most times little worth, if they be mixed with sand, gravell, or stone. So the blew is reputed the best, the yellow the next, the gray the next, and the red lesse durable then the other three; and yet it is thought the red to be the better, if it be found upon the blew, or others. These Marles doe lye in veines or floores, amongst these hillocks or copped grounda most commonly whereof I have spoken, and do oftentimes shew themselves at the foot of the hill, or about the mid-way, between the foot and the top thereof: some of them have over them a cover of ground, which we call Cope, not exceeding seven or eight foot in depth, some lie deeper, and other some do arise, as namely, where the round lyeth not high, and that Marle commonly is very good; and there is in diverse levell grounda good Marle.

And as Marle is for the most part of these foure colours, so is arable ground for the most part of these foure sorts following; that is to say, either a cold, stiffe and wet clay, which is either the cope of the Marle, or lyeth neer unto it, and is therefore commonly called, *The Marle Cope ground*, or a Haifel Mould, which I count to be one of the best wealdish Moulds, being a compound Mould, and very good for Marle, and will quit the cost very well. Then there are two sorts of sandy Mould, the one being a reasonable good kind, but not equal to the haifel Mould, for you shall have in divers places of the weald this haissell mould to bear two or three good crops of Wheat, being Summer fallowed, together, which you shall hardly have of any sandy ground without mending: but as I said of the better sort of these two kinds of sandy Moulds, you have commonly very rich Wheat, being well Marked, which is not so barren as the other; but this last kind of sandy Mould is a very barren kind of ground, and hath a very fleet Mould, and you shall have very heath grow upon it in divers places; and yet being ordered, as followeth, with Marle, will bear both good Corn and

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3. 4.

Four sorts of
Grounds.

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3. 4.

and Pasture. And now that wee may the better understand how to Marl and Manure every of these sorts by it self, you must know, that the haifell ground being dry, and not subject to Winter-springs, or tears of water (for which, some call such, A whining or weeping ground) is to be handled thus.

The ordering
of the Haifell-
Mould.

First, Plough it as deep as you can, with the strength of eight beasts at the least; and be not afraid to Plough up some part of the dead earth that lyeth under the uper-good Mould: for the Sun, the Rain, the Wind, and the Frost, will in time mellow and amend it; and besides that, the Mould will be the deeper for a long time after, and thereby keepe it selfe the longer from being stiffened with the Marle. Then you may bestow 500. Cart-loads (as we call them) of Marle upon each acre thereof, every load containing 10. or 12. bushels of eight gallons, and each acre containing 160. rods of 16. foot and a half to a rod. Then also you may chuse whether at the first breaking up you will sow it with Oates, to kill the Grasse, or else first Marle it, and sow it with Wheat, or otherwise Summer-fallow it in the *May* after the Oates, and then Marle it, and sow it with Wheat. Upon that fallow or gratten (as we call it) you shall doe well to sow it with Pease, and at *Michaelmas* following, to sow that Pease-stubble or gratten with Wheat again, which also will be the better, if the Summer wherein it carried Pease, were moyst; because the Pease being rich and thick, do destroy the Grasse, that together with the washing of the fallowes by raine, doth greatly consume the heart and vertue; or, as we call it, the state of the ground. But if that Summer were dry, then is a fallow best, because the Sunne with his heat doth much good to the ground, and inableth it the better to beare out the weather in the Wheat-season ensuing. If you like to sow it, as I said, with Pease, sow them as carely and timely as you may, for they will be so much the sooner harvested, and then also you may Plough or stirre your gratten the sooner, whereby it will be the better hardned to beare out the weather in the time of sowing of your Wheat: but I doubt, Pease doth somewhat stiffen it. Two bushels of Wheat do suffice for the sowing of an acre hereof, except it be for the first crop, after the

the new breaking up of the ground; during which time, there is found a worme, called an *Emble*, which in *French* signifieth Corn in the ground, being of colour yellow, and of an inch in length, and will eat some part of the Corn; but if you sow it thick, it will be both small, eared, and thick, and slender of straw, which the rain and wind will beate and hurle downe, and then it will scarcely rise again; or if it doe, yet through the neernesse of the shadow of the trees and hedges, that in so small closes be many, it will rather rot for want of drying, then come to maturity, that is, to perfect hard, and full grown Corn. After your first marling, you must carefully fore-see, that you plough not the ground either with deep or broad Furrowes, but fleet and narrow, lest you cast your Marl into the dead Mold; for Marl differeth much from Dung in this behalfe; Dung spendeth it self upward, and howsoever deepe it lie, the vertue thereof will ascend; but Marl (as saith Sir *Walter Henly*, in his Husbandry) sendeth his vertue downward, and must therefore be kept aloft, and may not be buried in any wise. Furthermore, if your ground be hillish or coppied, it shall be fit that you make your Ridges 7. or 8. foot broad at the least; for in such falling lands, the more broad furrowes you make, as you must make many, where you make Ridges, the more of your Marl shall be washed and carried into the bottomes. It is good also to draw a crosse or quarter-Furrow, and opening the ends of your land-Furrowes stopped, into it, to leave the other endes of your Furrowes that the water-shoot runne not all the length of the field. Again, this ground would alwaies be sowne under furrow, and that also before *Michaelmas*, if the season will so permit: for this ground (if it be well husbanded) will be mellow and hollow, or loose, whereby through Raine and Frost, it would sinke downe from the root of the Wheat, if it should be sown above Furrow, the which being uncovered, must needs be bitten and killed with the cold. It is also very fit that you harrow not this sort of ground too small, but that you leave the clods as big as a bowl, the which being mouldred with the frost, will both cover and keep warme what is underneath.

neath. Moreover, it shall be good, that upon some fair and dry day, in the beginning of *March*, you put your flock of Sheep into your Wheat, that with their trampling upon it, the Corn may be well, and fast closed with the earth, yea, and presently after (if it will bear foot) you may roll it as you doe Barley, whereby both the Clods shall be broken, and the Gratten or stubble shall be more even and ready for the Mower. Generally you must understand, that after you have bestowed your *Marle* in the field, you ought to let it lye unsprad abroad, untill you be ready to plough, and then immediately after the spreading of it, turn it into the ground with the Plough; for otherwise, if it should lye long spread in the field, the Sun will spend; no small part of the fatness thereof, although I know many desire it, because it will be the smaller being burned with the Sun; which I like not. And therefore also no good Husband will carry and spend his dung in the time of Summer, except he do presently withall plough it into the ground; for although the Mould of the arable Land it self will take good, if it be turned to the Sun, which will both dry and fasten it, yet the matter fareth far otherwise with the *Marle*, from which if the Sun shall draw and suck the fat moisture that maketh the Land fertile, then becommeth it (as *Columella* speaketh of the worst sort of ground) *Solum siccum, pariter & densum & macrum, quod siue exerceatur, siue cessat, colono refugendum est.* It becommeth (saith he) a dry, thick, and lean Clod, which whether it be tilled or laid to rest, must be forsaken of the husbandman as unprofitable. And now your Hazell-mould being thus marled, plowed, sown, and manured, you may not charge with Wheat above twice, and then it must rest five or six yeares together; all which time it will bear a very good and sweet Pasture, well set with a white Clover, or three-leaved grasse, most barning and profitable, both for Sheep and Bullocks.

After those yeares ended, it will grow to some Moss, or will peradventure cast up Broom; and then it is time to break it up, and sow and handle it as before for two other Wheat-seasons or crops, leaving it a wheat-gratten or stubble, rather than with an Oat gratten or stubble, which
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burneth the Land being marled. Being thus interchangeably sowed and rested, your Hazell mould will continue good arable and pasture, by the space of thirty yeares together, whereas if it should be continually sowed, six, or seven, or moe yeares together without rest, it will become utterly unfruitfull, both for Corn and Cattell also. Neither will it any thing avail to marle it over again when it is so decayed, because the former marle having his juice exhausted by continuall Tillage, whereof the Corn sucketh one part, and the Sunne, Wind and Weather dry and wasteth the rest, is but a dead Clod (as I said) that is not capable of new *Marle* to amend it, nor casteth any profitable grass at all. For proof hereof, I my self have seen, that the common earth of High-ways, by treading of Cattell, washing of Raine and the drying of the Sunne and weather, lay separated from the naturall juice which it had in the pit, and spreading it upon the ground, I saw that the land was not only not amended, but much the worse by it. And now for an end of handling this sort of Hazell ground; if it shall appear unto you that five hundred loads of Marle upon the Acre, have clanged, stiffened, and too fast bound your land (as indeed the nature of *Marl* is to bind and to stiffen) then take you some of these waies to help it: either rest it four or five yeares, or fodder upon it before you bring it up with so many Cattell as you may; or take the uppermost part of your Ditches or Fore-lands, or wast places of your fields which you may mingle with Dung, and which, before you sow your Wheat, you may lay upon your fallow, and stir it in with your plough, and by this you shall both loosen your *Marle*, and refresh your ground: so that within forty yeares the mould of your ground will clean eat up and swallow the *Marle* that you lay upon it; and then become hungry, and is capable of *Marle* againe as it was before at the first.

And by this also you may see the very cause for which it is good not to sow your marled land continually, but to pasture it by turns, and so give it rest; namely because the continuall plowing doth exhaust and spend the fat of the *Marl*, leaving the drosse, dry, and fruitless parts thereof, to lye and cover the face of your ground: whereas pasturage, through the dunging,

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treading, and foddering of Cattell, doth increase a new Mould, which mingling it self with the dead Mould, doth in the end give some life and heart unto it. And therefore these Farmers and Owners that have been at the cost to marle their ground, and will not forbear to till it, but hastening to raise their charge, do thereby utterly strike it with barrenness, are like to *Aesop* man, who having a Hen that layed him every day a golden Egge, and being greedy to have all the gold at once, did therefore kill the Hen, thinking to have found her belly full of gold, and so was both defrauded of that he looked for, and lost also what he had before. Hitherto of the nature, ordering and marling of this hazell ground. Generally now for the continual fallowing and stirring thereof, you must understand, it may neither be fallowed wet, lest it answer more Grass than Corn; nor yet so dry, that the dead bottom swel up, as in great drowth it will, and swallow the good Mould that lieth above: and therefore bind not your self to any precise time of any month, but the opportunity either in *May* or *June*, as you shall find the weather to have prepared it for your desire. In the like temper you ought to stir it after a shower, after *Saint James* his day, or in the end of *July*, for so will it be dry and hard before the time of sowing: whereas if it be stirred later, every small Rain will distemper it into Dirt or Mire, by reason of the tenderness thereof, and then can you not fitly bestow your seed upon it.

The ordering
of the Marl
Cope ground.

The Marl Cope ground followeth, which is most commonly (as I said) a stiffe, wet, cold Clay, and not so fit as the former to be marled for Corne, except in some few flecte places thereof, but yet it may serve for Pasture or for Oates; such of them as be marled, must be fallowed flect or shallow, lest the Marle become drowned in the wet: then being marled, they may in dry summers (and not over-moist Countries) beare Wheate in some mediocritie. Three hundred loads at the most of Marle are sufficient for an acre of this kind, and two bushells and a halfe of Wheat will sow the same, which must be cast above furrow fourteen or twenty daies before *Michaelmas*. It requireth round, high and narrow Ridges, and that the

the water-furrowes be stricken somewhat deep, the better to convey moisture from the Corne, and that it be left cloddy, as much as may be: and yet to say the truth, such as will convert this sort of ground to Tillage, must provide a greater quantity of rich ground or Greet (as we terme it) and Dung, than of Marle it self, to amend this Land withall. But if there be any ground that is light and whining, or weeping, because of Springs that are therein, and therewith doth cast up Rushes, let that be marled upon the greene land with foure hundred or five hundred loads upon the acre, about the latter end of Summer; for so will the Marle sinke into it, and cast up a sweet grasse for eight or ten years together, and untill that the Marle be sinke so low, that another sward or crust of earth be grown over it, and then it is fit time to plow it, but yet very flete and narrow, for so will it bear good Oats; but if it be so wet that you cannot adventure to sow your Wheat upon it, because the Rushes be not killed with this first plowing, then may you sow it againe with Oates, drawing good water-furrowes to draine it, because it will be the wetter for plowing, and thereby the Marle also will the sooner lose his force; thus doing, let it lie to pasture again.

Rushes.

There be some other grounds of the Marle-Cope, which carry a sowe Grasse, and the Dyers-Weed, (commonly called Greening-weed) and having a great tore thereof, the which also may be amended by three hundred or four hundred load of Marle upon the acre of the green land: for the Marle will both rot the tore or vesture thereof, and also enrich the Mould very much; so as it will answer good Pasture twelve years after: and when you shall perceive that the Marle is well sunk, then may it be Ploughed flet and narrow, sowed with Oats, and fallowed; so may it both bear good Wheat, if it find a good season, and be the richer a long time after, partly by the benefit of the Marle, partly by the rotting of the tore and sward, and partly by the dung and water of the Cattell that pasture upon it: for the sweeter the Pasture is, the more Beast it feedeth, and the more beasts it beareth, the more it self is amended by it.

Dyers weed.

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Touching the fallowing of this ground great heed is required: for as it (swelleth more then the Hæll-ground, if be taken hard and dry, so it is more grassie then that, or the Sandy Soyl if you fallow it wet: The season therefore followeth commonly in *Aprill*, or in the beginning of *May*, for to fallow it, and to stirr it about *Midsummer*, or so soon after as the rain shall have prepared it meet for your unshod Oxen to labour upon it, Many men fearing to hit the right season for this ground in the Spring of the year, do make it ready by a Winter fallow before *Christmas*, and by stirring it before *Midsummer*, if they may, which manner is not to be misliked.

The ordering
of the Sandy-
moulds.

Lastly, commeth the two sorts of Sandy-ground, and gravelly-mould; the one being to be ordered much after the hazell mould; saving he would have somewhat more marle, and also would be favoured more in the often tillage, than it: for the hazell mould will bear or endure more than the Sand. But this last sort of sandy-ground, being a very staring Sand (as we use to call it) for much of it will bear Heath, being of it self very barren, and very fleet or shallow Mould, and over hot and dry, and by reason of that extremity, is unfertill except it be marled very plentifully. And therefore when you break up this ground, Plough it as deep as you may, not fearing to cast down the best Mould thereof, because the *Marle* will pierce thorow, and sink down into it. An acre of this ground requirerh five hundred or six hundred loads of your *Marle* at the least. Sow alwaies under furrow about *Michaelmas* with two bushels and a half upon the acre, which it will better carry than the Hæll ground: for although the straw be small, yet will it be harder, and stand better than that of the other. The worme whereof I speak, will be busie with that, that groweth on this sort of ground, until that the heat thereof be somewhat aswaged by the Marl. If your ground be hilly, make your Water-furrowes in such sort, as I have said before, for the saving both of your *Marle* and Mould, harrow it very litle, leave it as cloddy as you may. After that you have taken a Crop from it, fallow that Wheat Gratten or Stubble in *May*; after that stirr it also, and then about *Michaelmas* sow it with Wheat again: for
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it is not yet rich enough to bear you good Pease. This done, let it rest four or five yeares, and if it send up any plenty of broom, cut or pul them when they be of some mean bigness, but plough not the ground untill it have taken such rest; and after it, you may well break it up of new, and sow it with Oats: which Oat-gratten or Stubble, you must Summer-fallow, when it is at the Harvest: and then if you desire to have it in good heart, you must Marle it with three hundred or four hundred loads upon the Acre again. After this Crop thus taken, rest it five or six years, and then take one Crop more of Oats from it, and after a Summer-fallow, sow it with Wheat, and suffer it to lye a Wheat Gratten or Stubble, till it shall have rested as before is appointed for the hazell ground, and so it will be the better thirty or forty yeares after the marling. Wee have in this Weald a sandy and gravelly ground that is wet and weeping, the which is scarcely worth the Marling, except the nearness of the *Marl*, and thereby the small cost and charge thereof may intice a man to bestow the cost upon it with *Marle*, and then the best way is to Marl upon the green Land, or is upon a fallow, with 500. loads or more upon the Acre, or rather to take the profit thereof by Pasture then by Tillage: for it will hardly beare good Corn, which is soon killed with wet vapour that is continually sent up from the wet springs that lye under it. This sort of wet ground is to be fallowed, when it is both hard and dry, because it swelleth not as doth the *Hazell Mould*, and may therefore be taken in *June*, if former fair weather bring it not to a dry season; and it is to be stirred also after a shower, in the like plight as the *hazell-Mould* before. Your marleable grounds being ordered in this wise, severally set down for each kind of them, will continually stand fruitfull either for corn or pasture, and albeit the high prices which Corn hath of late yeares carried, may allure some men to sow corn incessantly, and thereby to spend their *Marle*, and to choke their arable in the end, yet I doubt not but the wiser sort can see that it is much better to maintain their grounds hearty and in good plight for ever, then to raise a short gain, that will bring a long and perpetuall loss upon them; the rather also, because that butter,

Cheefe, and the flesh of beef and mutton be advanced in price equally, if not beyond Wheat, Rye, barley, and the other grains. Howbeit a good Husbandman will make his profit of them both: for if he have one hundred, or one hundred and twenty acres of this Wealdish arable, he will so Marle and manure them, that dividing his land into five or six equall parts, he may continually plough twenty, or five and twenty acres for corn, and yet lay to Pasture the rest by turnes, so that by the help of his *Marle* his land shall be continually rich and profitable, both in the one and other of them. And thus I have spoken of the Weald, describing the nature and properety thereof: so may every man of discretion and judgement, which shall meet with earth of the same quality and condition (in what part of this Kingdome soever) make application of these Rules before rehearsed, and no doubt but the profit will make both the labour and cost profitable and pleasant.

THE



The severall waies, according to the opinions of Writers, and the certaine waies, according to the experience of Husbandmen, for the destruction of Moles; or Moales which digge and root up the earth, and how to reduce and bring the ground to the first goodnesse, having been spoyled by them.

IT is needles either to describe the nature and quality of this Vermin, or the injury and hurt which they do to the Husbandman, Gardiner, and Planter, since no Country is exempt from their annoyance; but touching the remedies, they are of greater secrecie, and therefore I thought good in this place to insert them.

The antient writers are of divers opinions touching the manner of destroying this creature, and therefore have left unto us sundry Medicines how to work the same: amongst the which, one writeth, as an approved experiment, that if you take Walnut shels, and fill them with brimstone, chaff, and Petrosin, and then setting them on fire, put them into holes or trenches; through which the Moal passeth, the very smel or stink therof will poyson them; so that if you dig, you shall find them dead in their holes.

Another affirmeth, that if you take brimstone, and dank stinking litter of horses, and burn it in the holes or haunts of the Moals, it also will impoyson them, so as you shall find they will come out of their Caves, and lye dead upon the green grass.

A third affirms, That if you take green Leeks, Garlick, or Onions, and chopping them grossely, thrust it into the holes, the very fume or savour thereof will so astonish and amaze the Moales, that they will presently forsake the earth, and falling into a trance, you may take them up with your hands. Now there is not any of these medicines which can

be disallowed; for there is no doubt but that they will work the effects spoken of, if the Moale can be brought to take a full sent thereof: but it is a Vermin curious of sent, and passing quick of hearing, and being in a spacious ground, will prevent these baits: and therefore they are rather to be applied for garden or little grounds, where there is but a Moal or two, than in large fields, where there be many hundreds.

To conclude for this matter of medicines, or for the helping of gardens, hop-yards, or any small spot of ground, there is not anything held more available, than to sow in that place the herb called *Palma Christi*; for it is found by certaine experience, that wheresoever that herb groweth naturally of it self, or otherwise, is either purposely sown or planted, there in no wise will any Moal abide.

Thus much I thought good to shew you for the use of medicine, and for clearing of small grounds; now for the annoyances which happen to great, large, and spacious fields, through the multitude of Moals, there is only three absolute wayes for the curing of the same.

The first is, in the moneths of *March* and *April*, to view where they cast, and go about to make an extraordinary great hill, in which they build them nests, which is known by the newness of the Mould; then look for the new trench which leadeth to the same; for as she goeth she returneth: then with your Moal-spade open the trench in divers places, and then very still & silently, and observing to take the wind, to prevent both hearing and smelling, watch the Moal as she goeth or returneth, which is, Morning, Noon, and Evening, and as soon as you see her cast, strike her with your Moal-speare, made of many sharp pikes, and so cast her up, and kill her. Thus have I seen by one man an hundred destroyed in one day.

The next infallible way for the destruction of Moales is, If you can by any possible means bring in water to over-flow and wash your ground, and as soon as the earth is wet over, the Moales will come forth of themselves, and you may gather
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ther them up with your hands at pleasure.

The last (indeed as much approved as any) is to take a live Moal in the month of *March*, which is their bucking or ingendring time, and put it into a deep bras Basson, or other deep smooth Vessell, out of which the Moal cannot creepe, and then at evening bury it in the earth up to the brimme, and so leave it, and the imprisoned Moal will presently begin to fhrike, complain, or call so that all the Moales in the ground will come to it, and tumbling into the Vessell, they are prisoners also, and the more prisoners, the greater will be the noise: and the more noise, the more Moales will come to the rescue; so that I have seen 50. or 60. taken in one night, and in one night, and in one Vessell, or bras Kettle.

Now having thus learned how to destroy the Moales, it is meet you also know how to prevent the coming in of forraign Moales; because though you keep your ground never so clean, yet if your next neighbour be an ill husband, his field may soon impoyson yours again: herefore to prevent the coming in of any forreigne Moal, make but little Furrows or Trenches about your ground, and scatter in them small round balls made of Hempseed, or Hemp-seed and *Patma Christi* beaten together, and you shall not need to fear the coming in of any neighbour Moals, how many soever there be about you.

Lastly, for the reducing or bringing the ground to the first perfection again (for howsoever some Husbandmen say, Moe Moal-hills, moe ground; yet 'tis certain, that moe Moale-hills, less good ground) for never was yet sweet grasse seen on a Moale-hill; therefore to bring it to perfection, which I mean to be meadow ground, or ground to be mowne, which Moale-hills cannot be: you shall first with a sharp paring-shovell, pare off the swarth about three fingers deep, for fear of hurting the roots of the grasse: and then the swarth taken off, digge away the rest of the Mould, and scatter it as small as you can round about the hill, then take the green swarth, and cutting it artificially, lay it close and fast, and levell, where you took away the Mould, as if there had never been Hill there: and thus do to all your hills, though they be never
so

so innumerable; and after all your ground is levelled, as soon as the first shoure falleth, run all your ground over with a pair of back Harrowes, or an Harrow made of a Thorn bush, and it will break the mould as small as ashes, which will so comfort and refresh the root of the grass, that it will grow in infinite abundance; and sowness which was caused by reason of the Hills, will come again to a perfect sweetness, and the meadow will be more fruitfull then before by many degrees. And thus much for the destruction of Moales, and the reducing of the earth to his first goodness.

FINIS.
